

CLAIMS:

What is claimed is:

1. A method in a data processing system for
5 antialiasing lines for display, the method comprising:
receiving graphics data for display, wherein the
graphics data includes primitives defining lines;
applying a gamma correction to the graphics data on
a per primitive basis to form the antialiased lines; and
10 displaying the antialiased lines.

2. The method of claim 1, wherein the gamma correction
is performed using a gamma correction table.

- 15 3. The method of claim 1, wherein the gamma correction
is performed using a gamma correction function.

4. The method of claim 2, wherein the gamma correction
table is specified by an application and loaded into a
20 graphics subsystem processing the graphics data for
display within the data processing system.

5. The method of claim 3, wherein the gamma correction
function is specified by an application and loaded into a
25 graphics subsystem processing the graphics data for
display within the data processing system.

6. The method of claim 1, wherein the applying step
comprises:
30 adjusting intensity of pixels defining the
primitives.

7. A data processing system comprising:
a bus system;
a communications unit connected to the bus, wherein
data is sent and received using the communications unit;

5 a memory connected to the bus system, wherein a set
of instructions and data including a gamma correction
table are located in the memory; and

a processor unit connected to the bus system,
wherein the processor unit executes the set of
10 instructions to receive graphics data for display,
wherein the graphics data includes primitives defining
lines; apply a gamma correction to the graphics data on a
per primitive basis to form antialiased lines; and
display the antialiased lines.

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8. The data processing system of claim 7, wherein the
bus system includes a primary bus and a secondary bus.

9. The data processing system of claim 7, wherein the
20 processor unit includes a single processor.

10. The data processing system of claim 7, wherein the
processor unit includes a plurality of processors.

25 11. The data processing system claim 7, wherein the
communications unit is an Ethernet adapter.

12. The data processing system of claim 7, wherein the
processor unit and memory is located in a graphics
30 adapter.

13. A data processing system for antialiasing lines for display, the data processing system comprising:

receiving means for receiving graphics data for display, wherein the graphics data includes primitives defining lines;

applying means for applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines; and

displaying means for displaying the antialiased lines.

14. The data processing system of claim 13, wherein the gamma correction is performed using a gamma correction table.

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15. The data processing system of claim 13, wherein the gamma correction is performed using a gamma correction function

20 16. The data processing system of claim 14, wherein the gamma correction table is specified by an application and loaded into a graphics subsystem processing the graphics data for display within the data processing system.

25 17. The data processing system of claim 15, wherein the gamma correction function is specified by an application and loaded into a graphics subsystem processing the graphics data for display within the data processing system.

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18. The data processing system of claim 13, wherein the applying means comprises:

means for adjusting intensity of pixels defining the primitives.

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19. A computer program product in a computer readable medium for antialiasing lines for display, the computer program product comprising:

10 first instructions for receiving graphics data for display, wherein the graphics data includes primitives defining lines;

15 second instructions for applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines; and

third instructions for displaying the antialiased lines.

20. An apparatus comprising:

an input, wherein position information for a pixel 20 is received at the input;

a coverage interpolation unit connected to the input, wherein the coverage interpolation unit generates a coverage valued at a first output in which the coverage value identifies how much of the pixel is covered at a 25 first output;

an alpha interpolation unit connected to the input, wherein the alpha interpolation unit identifies a degree of transparency for the pixel as an opacity value at a second output;

30 a color interpolation unit connected to the input, wherein the color interpolation unit generates a red, green, and blue value for the pixel at a third output;

a gamma correction unit connected to the first output, wherein the gamma correction unit generates a gamma corrected value for the pixel using the coverage value at a fourth output;

5 a modulate unit, wherein the modulate unit is connected to the second output and the fourth output, wherein the modulate unit adjusts the gamma corrected value to the opacity value to generate an adjusted gamma corrected value at a fifth output;

10 a frame buffer having a sixth output, wherein the frame buffer holds a final pixel value; and

a blend unit connected to the fifth output and the third output, wherein the blend unit blends the adjusted gamma corrected value and the red, green, and blue value

15 for the pixel with a current pixel value from the sixth output of the frame buffer to form the final pixel value for display.

21. The apparatus of claim 20, wherein the gamma
20 correction unit is connected to the first output of
coverage interpolation unit by a clamp, wherein the clamp
prevents values generated by the coverage interpolation
unit from going out of a selected range of values.